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SABIC® PP PHC31-81

PP IMPACT COPOLYMER

DESCRIPTION

SABIC[®] PP PHC31-81 is a grade which combines high stiffness with good impact strength. Its excellent flow properties and narrow molecular weight distribution permits fast cycle-times and injection moulding of articles demanding low warpage and high dimensional stability. This grade is formulated with a combined processing and UV-stabilisation package. Typical applications are automotive components. It is also available in a general purpose additive package.

SABIC® PP PHC31-81 is a designated automotive grade.

IMDS ID: 80775790

TYPICAL PROPERTY VALUES

Revision 20181012

POLYMER PROPERTIES Medical Section of Light Section (1908) Jean of Solidation (1908) Jean	PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
beat 20 °C and 2.16 kg 150 4g/min 150 1133 Desiry 150 1133 150 1133 150 1133 Mould strinkage ***********************************	POLYMER PROPERTIES			
Desiry 95 95 10 <t< td=""><td>Melt Flow Rate</td><td></td><td></td><td></td></t<>	Melt Flow Rate			
Mould shrinkage 24 hours after injection moulding ⁽¹⁾ 16 % SABIC method FORMULATION UV stabilized ∅ 0 0 0 Ant static agent ∅ 0 0 0 Nucleating agent ∅ 0 0 0 MECHANICAL PROPERTIES Tensile text Stress at yield 5 MPa 50 527-2 1A Stress at yield (2) 5 3 50 527-2 1A stress at yield (2) 5 3 50 527-2 1A stress at yield (2) 5 3 50 527-2 1A stress at yield (2) 5 50 527-2 1A 50 527-2 1A stress at yield (2) 5 50 527-2 1A 50 527-2 1A 50 527-2 1A stress at yield (2) 5 50 527-2 1A	at 230 °C and 2.16 kg	15	dg/min	ISO 1133
Experimentation (moltain) 16. 8. ABIC method Exposultation 2. <th< td=""><td>Density</td><td>905</td><td>kg/m³</td><td>ISO 1183</td></th<>	Density	905	kg/m³	ISO 1183
FORMUATION UV stabilized □				
Vostabilized □ 1.00	24 hours after injection moulding ⁽¹⁾	1.6	%	SABIC method
Antistatic agent □ 1 2 2 1 2 1 2 1 2 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 3	FORMULATION			
Nucleating agent □ •	UV stabilized		-	-
MECHANICAL PROPERTIES Tensile tes stress at yield 25 MPa iSo 527-2 1A (So 127-2 1A) (So 127-2 1A (So 127-2 1A (So 127-2 1A) (So 127-2 1A	Anti static agent		-	-
Tensile test stress at yield 25 MPa 50 527-2 1A strain at yield (2) 5 MPa 50 527-2 1A tensile modulus (3) 1300 MPa 50 527-2 1A tensile modulus (3) MPa 50 527-2 1A tensile modulus (3) WPa 50 527-2 1A tensile modulus (3) MPa 50 180/1A tensile modulus (3) MPa 50 179/14A tensile modulus (4) MPa 50 179/14A tensile modulus (4) MPa 50 179/14A tensile modulus (4) MPa 50 179/14A tensile mod	Nucleating agent		-	-
stress at yield 55 MPa ISO 527-2 1A strain at yield (2) 5 % ISO 527-2 1A tensile modulus (3) 1300 MPa ISO 180/1A tensile modulus (3) 1300 MPa ISO 190/1A ISO 190/1A tensile modulus (3) 1300 MPa I	MECHANICAL PROPERTIES			
strain at yield (2) 50 % 50 527-2 1A tensile modulus (3) MPa 150 150 160 tensile modulus (3) MPa 150 180	Tensile test			
tensile modulus ⁽³⁾ MPa ISO 527-2 IA tzod impact notched Image: Compact Not Compact No	stress at yield	25	MPa	ISO 527-2 1A
Izad impact notched at 23 °C 11 kl/m² iSO 180/1A		5	%	ISO 527-2 1A
at 23 °C Id/m² ISO 180/1A at 0 °C 7 Id/m² ISO 180/1A at 20 °C Id/m² ISO 180/1A at 20 °C Id/m² ISO 180/1A Charpy Impact Strength Notched at 23 °C Id/m² ISO 179/1eA at 0 °C Id/m² ISO 179/1eA at -20 °C Id/m² ISO 179/1eA Hardness Shore D Id/m² ISO 179/1eA Heard deflection temperature (4) ISO 868 at 1.80 MPa (HDT/B) ISO 75 at 0.45 MPa (HDT/B) ISO 75	tensile modulus ⁽³⁾	1300	MPa	ISO 527-2 1A
at 0 °C KI/m² ISO 180/1A at -20 °C 50 kJ/m² ISO 180/1A Charpy Impact Strength Notched at 23 °C LJ/m² ISO 179/1eA at 0 °C 8 kJ/m² ISO 179/1eA at -20 °C KJ/m² ISO 179/1eA Hardness Shore D 5 kJ/m² ISO 888 THERMAL PROPERTIES Heat deflection temperature (4) at 1.80 MPa (HDT/A) 55 °C ISO 75 at 0.45 MPa (HDT/B) 80 °C ISO 75	Izod impact notched			
at -20 °C kl/m² ISO 180/1A Charpy Impact Strength Notched kl/m² ISO 180/1A at 23 °C kl/m² ISO 179/1eA at 0 °C kl/m² ISO 179/1eA at -20 °C kl/m² ISO 179/1eA Hardness Shore D 56 - ISO 868 THERMAL PROPERTIES Heat deflection temperature (4) at 1.80 MPa (HDT/A) 55 °C ISO 75 at 0.45 MPa (HDT/B) 80 °C ISO 75	at 23 °C	11	kJ/m²	ISO 180/1A
Charpy Impact Strength Notched at 23 °C I2.5 IX/m² ISO 179/1eA at 0 °C 8 IX/m² ISO 179/1eA at -20 °C IX/m² ISO 179/1eA Hardness Shore D 65 - ISO 868 THERMAL PROPERTIES *** *** Heat deflection temperature (4) *** *** ISO 75 at 1.80 MPa (HDT/A) 80 *** ISO 75	at 0 °C	7	kJ/m²	ISO 180/1A
at 23 °C kJ/m² iSO 179/1eA at 0 °C 8 kJ/m² iSO 179/1eA at -20 °C kJ/m² iSO 179/1eA Hardness Shore D 65 kJ/m² iSO 868 THERMAL PROPERTIES Heat deflection temperature (4) ** ** at 1.80 MPa (HDT/A) 55 *C iSO 75 at 0.45 MPa (HDT/B) 80 *C iSO 75	at -20 °C	5	kJ/m²	ISO 180/1A
at 0 °C 8 kJ m² ISO 179/1eA at -20 °C kJ m² ISO 179/1eA Hardness Shore D 65 -2 ISO 868 Heat deflection temperature (4) at 1.80 MPa (HDT/A) 55 °C ISO 75 at 0.45 MPa (HDT/B) 80 °C ISO 75	Charpy Impact Strength Notched			
at -20 °C kl/m² ISO 179/1eA Hardness Shore D 65 - ISO 868 Heat deflection temperature ⁽⁴⁾ at 1.80 MPa (HDT/A) 55 °C ISO 75 at 0.45 MPa (HDT/B) 80 °C ISO 75	at 23 °C	12.5	kJ/m²	ISO 179/1eA
Hardness Shore D 65 - ISO 868 THERMAL PROPERTIES Heat deflection temperature ⁽⁴⁾ at 1.80 MPa (HDT/A) 55 °C ISO 75 at 0.45 MPa (HDT/B) 80 °C ISO 75	at 0 °C	8	kJ/m²	ISO 179/1eA
THERMAL PROPERTIES Heat deflection temperature ⁽⁴⁾ at 1.80 MPa (HDT/A) 55 °C ISO 75 at 0.45 MPa (HDT/B) 80 °C ISO 75	at -20 °C	5	kJ/m²	ISO 179/1eA
Heat deflection temperature ⁽⁴⁾ at 1.80 MPa (HDT/A) 55 °C ISO 75 at 0.45 MPa (HDT/B) 80 °C ISO 75	Hardness Shore D	65	-	ISO 868
at 1.80 MPa (HDT/A) 55 °C ISO 75 at 0.45 MPa (HDT/B) 80 °C ISO 75				
at 0.45 MPa (HDT/B) 80 °C ISO 75	Heat deflection temperature (4)			
	at 1.80 MPa (HDT/A)	55	°C	ISO 75
Vicat Softening Temperature (5)		80	°C	ISO 75
	Vicat Softening Temperature ⁽⁵⁾			
at 10 N (VST/A)	at 10 N (VST/A)	149	°C	ISO 306

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
at 50 N (VST/B)	74	°C	ISO 306

- (1) All measurements on injection molded samples.
- (2) Speed of testing: 50 mm/min
- (3) Speed of testing: 1 mm/min
- (4) Flat wise (testbar 80*10*4mm)
- (5) Temperature rate: 120°C/h

QUALITY

SABIC Europe is fully certified in accordance with the internationally accepted quality standard ISO9001.

STORAGE AND HANDLING

Avoid prolonged storage in open sunlight, high temperatures (<50 °C) and/or high humidity as this could well speed up alteration and consequently loss of quality of the material and/or its packaging. Keep material completely dry for good processing.

DISCLAIMER

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